YX9200 SERIES
SYNCHRONOUS MACHINE DRIVE
User Manual

380V 0.75KW-G/1.5KW-P

⚠ **WARNING** Risk of electric shock

Preface

YX9200 series is the new generation products to meet general purpose and special technical demand. The new designed sensorless vector control performance of YX9200 inverter have improved the reliability at low speed, the overload capacity at low frequency and high control precision at open loop tension control mode. Its function of anti-trip and strong adaptability to worse grid, temperature, humidity and dust make it meet the high performance requirement of the customer application.

YX9200 power range is from 0.4KW to 450KW. It is built in RS 485 interface which can use software upload, download and monitoring the parameter of inverter. Built-in PID16 multi-speed, traverse control can realize various complicate high-accuracy drives and widely apply in Textile, paper industry, machine tool, package, printing, pump and fan.

This manual provides installation and configuration, parameters setting, fault diagnoses and daily maintenance and relative precautions to customers. Please read this manual carefully before the installation to ensure a proper installation and operation and high performance of YX9200 series inverters.
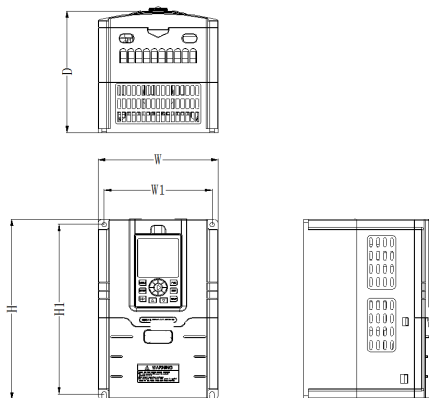
⚠ **DANGER**: indicates the situation in which the failure to follow operating requirements may result in fire or serious personal injury or even death.

⚠ **CAUTION**: indicates the situation in which the failure to follow operating requirements may cause moderate or slight injury and damage to equipment.

Chapter 1 Dimensions

Wall mounting

Inverter Model		W1	W	H1	H	D	Mount
G Type	P Type	(mm	(mm	(mm	(mm	(mm	hole
YX9200-2S0004G							
YX9200-2S0007G		74	85	144	142	113	Φ5
YX9200-2S0015G							
YX9200-4T0007G	YX9200-4T0015P						
YX9200-4T0015G	YX9200-4T0022P	88	98	174	184	135	Φ5
YX9200-2S0022G							
YX9200-4T0022G	YX9200-4T0037P	108	118	220	230	153	Φ5
YX9200-4T0037G	YX9200-4T0055P						
YX9200-4T0055G	YX9200-4T0075P	155	172	256	271	183	Φ5
YX9200-4T0075G	YX9200-4T0110P						
YX9200-4T0110G	YX9200-4T0150P	170	248	340	360	210	Φ6
YX9200-4T0150G	YX9200-4T0185P						

Inverter Model		W1	W	H1	H	D	Mount
G Type	P Type	(mm	(mm	(mm	(mm	(mm	hole
YX9200-4T0185G	YX9200-4T0220P	200	280	426	445	210	Φ8
YX9200-4T0220G	YX9200-4T0300P						
YX9200-4T0300G	YX9200-4T0370P	200	320	511	530	235	Φ8
YX9200-4T0370G	YX9200-4T0450P						
YX9200-4T0450G	YX9200-4T0550P	280	380	590	610	270	Φ10
YX9200-4T0550G	YX9200-4T0750P						
YX9200-4T0750G	YX9200-4T0900P	280	400	700	730	300	Φ14
YX9200-4T0900G	YX9200-4T1100P						
YX9200-4T1100G	YX9200-4T1320P	400	510	867	895	330	Φ16
YX9200-4T1320G	YX9200-4T1600P						

Floor mouthing

Inverter Model		W(mm)	H(mm)	D(mm)
G Type	P Type			
YX9200-4T1600G	YX9200-4T1850P	600	1440	399
YX9200-4T1850G	YX9200-4T2000P			
YX9200-4T2000G	YX9200-4T2200P			
YX9200-4T2200G	YX9200-4T2500P			
YX9200-4T2500G	YX9200-4T2800P			
YX9200-4T2800G	YX9200-4T3150P	720	1400	440
YX9200-4T3150G	YX9200-4T3500P			
YX9200-4T3500G	YX9200-4T4000P	950	1700	475
YX9200-4T4000G	YX9200-4T4500P			
YX9200-4T4500G	YX9200-4T5000P	950	1900	475
YX9200-4T5000G	YX9200-4T5600P			
YX9200-4T5600G	YX9200-4T6300P	1200	2000	600
YX9200-4T6300G	YX9200-4T7100P			

Chapter 2 Function Code Table

2.1 The symbols in the function code table are described as follows

"○": The parameter can be modified when the AC drive is in either stop or running state.

"×": The parameter can not be modified when the AC drive is in the running state.

"* ": The parameter is factory parameter and can not be modified.

2.2 Standard Function Parameters

Group P0: Standard Function Parameter					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
P0.00	Control mode	0：V/F control 1：Sensorless vector control(SVC) 2：Sensor vector control	1	1	×
P0.01	Main frequency source 1 selection	0：Digital setting 1(P0.02，UP/DOWN can modify,non-retentive at power failure) 1：Digital setting 2(P0.02，UP/DOWN can modify,retentive at power failure) 2：VI analog setting（VI-GND） 3: Clanalog setting（CI-GND） 5：Pulse setting 6：Multi-reference 7：Simple PLC 8：PID 9：485 communication	1	1	×
P0.02	Preset frequency	P0.07lower limit frequency ～ P0.06 upper limit frequency	0.01HZ	50.00HZ	○
P0.03	Command source selection	0：Operation panel control (LED off) 1：Terminal control（LED on）	1	0	○

		2：Communication control（LED blinking）			
P0.04	Rotation direction	0:Same direction 1：Reverse direction	1	0	○
P0.05	Maximum frequency	50.00Hz～320.00Hz	0.01Hz	50.00Hz	×
P0.06	Frequency upper limit	Frequency lower limit to maximum frequency (P0.05)	0.01Hz	50.00Hz	○
P0.07	Frequency lower limit	0.00Hz to frequency upper limit(P0.06)	0.01Hz	0.00Hz	○
P0.08	Source of frequency upper limit	0：Set by P0.06 1:VI 2:CI 4:PULSE setting 5：Communication setting	1	0	×
P0.09	Frequency upper limit offset	0.00Hz to maximum frequency (P0.05)	0.01Hz	0.00Hz	○
P0.10	Carrier frequency	0.5KHZ～16.0KHZ	0.1KHZ	Model dependent	○
P0.11	Carrier frequency adjustment with temperature	0：No 1：Yes	1	1	○
P0.12	Acceleration time 1	0.1～6000.0s	0.1s	Model dependent	○
P0.13	Deceleration time 1	0.1～6000.0s	0.1s	Model dependent	○
P0.14	Acceleration/ Deceleration time unit	0：1s 1：0.1s 2：0.01s	1	2	×
P0.15	Acceleration/ Deceleration time base frequency	0：Maximum frequency（P0.05） 1: set frequency 2：100HZ	1	0	×
P0.16	Auxiliary frequency source 2 selection	The same as P0.01(Main frequency source 1 selection)	1	0	×

P0.17	Range of auxiliary frequency 2 for 1 and 2 operation	0：Relative to maximum frequency 1：Relative to main frequency 1	1	0	○
P0.18	Range of auxiliary frequency 2 for 1 and 2 operation	0%-150%	-	100%	○
P0.19	Frequency source selection	Unit's digit：(Frequency spurce selection) 0：Main frequency source 1 1：1 and 2 operation (operation relationship determined by ten's digit) 2：Switchover between 1 and 2 3：Switchover between 1 and "1 and 2 operation" 4：Switchover between 2 and "1 and 2 operation" Ten's digit (1 and 2 operation relationship) 0：1+2 1：1 - 2 2：Maximum 3：Minimum	01	00	○
P0.20	Frequency offset of auxiliary frequency source for 1 and 2 operation	0.00Hz to maximum frequency (P0.05)	0.01HZ	0.00HZ	○
P0.21	Frequency reference resolution	1：0.1Hz 2：0.01Hz When changing the decimal point of the frequency command, please pay attention to changing the maximum frequency, upper limit frequency, etc.	1	2	×
P0.22	Retentive of digital setting frequency upon	0：Not retentive 1：Retentive	1	1	○

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
	power failure				
P0.23	Base frequency for UP/DOWN modification during running	0: Running frequency 1: Set frequency	0	0	×
P0.24	Binding command source to frequency source	Unit's digit (binding operation panel command to frequency source) 0: No binding 1: Frequency source by digital setting 2: VI setting（VI-GND） 3: CI setting（CI-GND） 5: PULSE setting 6: Multi-reference 7: Simple PLC 8: PID setting 9: 485 communication setting Ten's digit: Binding terminal command to frequency soure Hundred's digit: Binding communication command to frequency source Thousand's digit:Binding running command to frequency source	0001	0000	○
P0.25	G/P type display	1: G type 2: P type	1	Model dependent	*
P0.26	Motor parameter group selection	0: Motor parameter group 1 1: Motor parameter group 2 2: Motor parameter group 3 3: Motor parameter group 4	1	0	×
P0.27	Serial communication protocol	0:MODBUS protocol	1	0	×
Group P1: Start/Stop Parameter					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**

P1.00	Start mode	0：Direct start 1：Rotational speed tracking restart 2：Pre-excited start	1	0	○
P1.01	Startup frequency	0.00～10.00Hz	0.01Hz	0.00Hz	○
P1.02	Startup frequency holding time	0.0～100.0s	0.1s	0.0s	✕
P1.03	Startup DC braking current/ Pre-excited current	0%～100％	1％	0％	✕
P1.04	Startup DC braking time/ Pre-excited time	0.0～100.0s	0.1s	0.0s	✕
P1.05	Stop mode	0：Decelerate to stop 1：Coast to stop	1	0	○
P1.06	Initial frequency of stop DC braking	0.00Hz to maximum frequency	0.00Hz	0.00Hz	○
P1.07	Waiting time of stop DC braking	0.0～100.0s	0.1s	0.0s	○
P1.08	Stop DC braking time	0.0～100.0s	0.1s	0.0s	○
P1.09	Stop DC braking current	0%～100％	1％	0％	○
P1.10	Brake use ratio	0%～100％	1%	100%	○
P1.11	Rotational speed tracking mode	0：From frequency at stop 1：From zero speed 2： From maximum frequency	1	0	✕
P1.12	Rotational speed tracking speed	1～100	1	20	○
P1.13	Acceleration/ Deceleration mode	0：Linear acceleration/ deceleration 1：S-curve acceleration/ deceleration	1	0	✕

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
P1.14	Time proportion of S-curve start segment	0.0%～（100.0%～P1.15）	0.1%	30.0%	×
P1.15	Time proportion of S-curve end segment	0.0%～（100.0%～P1.14）	0.1%	30.0%	×
Group P2: Auxiliary Functions					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
P2.00	JOG running frequency	0.10 Hz to maximum frequency	0.01Hz	5.00Hz	○
P2.01	JOG acceleration time	0.1～6500.0s	0.1s	Model dependent	○
P2.02	JOG deceleration time	0.1～6500.0s	0.1s	Model dependent	○
P2.03	Acceleration time 2	0.1～6500.0s	0.1	Model dependent	○
P2.04	Deceleration time 2	0.1～6500.0s	0.1	Model dependent	○
P2.05	Acceleration time 3	0.1～6500.0s	0.1	Model dependent	○
P2.06	Deceleration time 3	0.1～6500.0s	0.1	Model dependent	○
P2.07	Acceleration time 4	0.1～6500.0s	0.1	Model dependent	○
P2.08	Deceleration time 4	0.1～6500.0s	0.1	Model dependent	○

P2.09	Jump frequency 1	0.0Hz to maximum frequency	0.01Hz	0.00Hz	○
P2.10	Jump frequency 2	0.0Hz to maximum frequency	0.01Hz	0.00Hz	○
P2.11	Jump frequency amplitude	0.0Hz to maximum frequency	0.01Hz	0.00Hz	○
P2.12	Forward/Reverse rotation dead-zone time	0.0S～3000.0s	0.1s	0.0s	○
P2.13	Reverse control	0: Enabled 1: Disabled	0	0	○
P2.14	Running mode when set frequency lower than frequency lower limit	0: Run at frequency lower limit 1: Stop 2: Run at zero speed	0	0	○
P2.15	Drop control	0.00HZ～10.00HZ	0.01HZ	0.00HZ	○
P2.16	Accumulative power-on time threshold	0h～65000h	1h	0h	○
P2.17	Accumulative running time threshold	0h～65000h	1h	0h	○
P2.18	Startup protection	0: NO 1: YES	1	0	○
P2.19	Frequency detection value (FDT1)	0.00Hz to maximum frequency	0.01Hz	50.00Hz	○
P2.20	Frequency detection hysteresis (FDT1)	0.0%～100.0%(FDT1 level)	0.1%	5.0%	○
P2.21	Detection range of frequency reached	0.0%～100.0% (maximum frequency)	0.1%	0.0%	○
P2.22	Jump frequency during	0: Disabled 1: Enabled	1	0	○

	acceleration /deceleration				
P2.23	Frequency switchover point between acceleration time 1 and acceleration time 2	0.00Hz to maximum frequency	0.01Hz	0.00HZ	○
P2.24	Frequency switchover point between deceleration time 1 and deceleration time 2	0.00Hz to maximum frequency	0.01Hz	0.00HZ	○
P2.25	Terminal JOG preferred	0：Disabled 1：Enabled	1	0	○
P2.26	Frequency detection value (FDT2)	0.00Hz to maximum frequency	0.01Hz	50.00Hz	○
P2.27	Frequency detection hysteresis (FDT2)	0.0%～100.0%(FDT2 level）	0.1%	5.0%	○
P2.28	Any frequency reaching detection value 1	0.00Hz to maximum frequency	0.01HZ	50.00Hz	○
P2.29	Any frequency reaching detection amplitude 1	0.0%～100.0% (maximum frequency)	0.1%	0.0%	○
P2.30	Any frequency reaching detection value 2	0.00Hz to maximum frequency	0.01HZ	50.00Hz	○

P2.31	Any frequency reaching detection amplitude 2	0.0%～100.0% (maximum frequency)	0.1%	0.0%	○
P2.32	Zero current detection level	0.0 %～300.0 %(100.0% rated motor current)	0.1%	5.0%	○
P2.33	Zero current detection delay time	0.01S～600.00S	0.01S	0.10S	○
P2.34	Output overcurrent threshold	0.1 %～300.0 % (100.0% rated motor current)	0.1%	200.0%	○
P2.35	Output overcurrent detection delay time	0.01S～600.00S	0.01S	0.00S	○
P2.36	Any current reaching 1	0.0 %～300.0 %(100.0% rated motor current)	0.1%	100.0 %	○
P2.37	Any current reaching 1 amplitude	0.0 %～300.0 %(100.0% rated motor current)	0.1%	0.0 %	○
P2.38	Any current reaching 2	0.0 %～300.0 %(100.0% rated motor current)	0.1%	100.0 %	○
P2.39	Any current reaching 2 amplitude	0.0 %～300.0 %(100.0% rated motor current)	0.1%	0.0 %	○
P2.40	Timing function	0：Disabled 1：Enabled	1	0	○
P2.41	Timing duration selection	0: P2.42 setting 1：VI 2：CI Analog input range corresponds to P2.42	1	0	○
P2.42	Timing duration	0.0Min～6500.0Min	0.1Min	0.0Min	○
P2.43	VI input voltage lower limit	0.00V～P2.44	0.01V	3.10V	○
P2.44	VI input voltage upper limit	P2.44～10.00V	0.01V	6.80V	○

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
P2.45	Module temperature threshold	0～100℃	1	75℃	○
P2.46	Cooling fan control	0：Fan working during running 1：Fan working continuously	1	0	○
P2.47	Wakeup frequency	Dormant frequency（P2.49）～ maximum frequency	0.01HZ	0.00HZ	○
P2.48	Wakeup delay time	0.0S～6500.0S	0.1S	0.0S	○
P2.49	Dormant frequency	0.00Hz to wakeup frequency P2.47	0.01HZ	0.00HZ	○
P2.50	Dormant delay time	0.0S～6500.0S	0.1S	0.0S	○
P2.51	Current running time reached	0.0～6500.0Min	0.1Min	0.0Min	○
Group P3 : Input Terminals					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
P3.00	X1 function selection	0：No function 1:Forward RUN (FWD) 2：Reverse RUN (REV) 3：Three-line control 4：Forward JOG (FJOG) 5：Reverse JOG (RJOG) 6：Terminal UP 7：Terminal DOWN 8：Coast to stop（FRS） 9：Fault reset 10：RUN pause 11：Normally open(NO) input of external fault 12：Mulit-reference terminal 1 13：Mulit-reference terminal 2 14：Mulit-reference terminal 3 15：Mulit-reference terminal 4	1	1	×

		16：Terminal 1 for acceleration /deceleration time selection			
		17：Terminal 2 for acceleration /deceleration time selection			
		18：Frequency source switchover			
		19：UP/DOWN setting clear (terminal, operation panel）			
		20：Command source switchover 1			
		21：Acceleration/Deceleration prohibited			
		22：PID pause			
		23：PLC status reset			
		24：Swing pause			
		25：Counter input			
		26：Counter reset			
		27：Length count input			
		28：Length reset			
		29：Torque control prohibited			
		30：PULSE input（enabled only for X5）			
		31：Reserved			
		32：Immediate DC braking			
		33：Normally closed(NC)input of external fault			
		34：Frequency modification forbidden			
		35：Reverse PID action direction			
		36：External STOP terminal 1			
		37：Command source switchover terminal 2			
		38：PID integral pause			
		39：Switchover between main frequency source X and preset frequency			
		40：Switchover between main frequency source Y and preset			

		frequency			
		41：Motor selection terminal 1			
		42：Reserved			
		43：PID parameter switchover			
		44：User-defined fault 1			
		45：User-defined fault 2			
		46：Speed control/Torque control switchover			
		47：Emergency stop			
		48：External STOP terminal 2			
		49：Deceleration DC braking			
		50：Clear the current running time			
		51：Switchover between two-line mode and three-line mode			
		52：Reverse forbidden			
		53~59：Reserved			
P3.01	X2 function selection	Same as above	1	4	×
P3.02	X3 function selection	Same as above	1	9	×
P3.03	X4 function selection	Same as above	1	12	×
P3.04	X5 function selection	Same as above	1	13	×
P3.05	X6 function selection	Same as above	1	0	×
P3.06	X7 function selection	Same as above	1	0	×
P3.07	X8 function selection	Reserved	1	0	×
P3.08	X9 function selection	Reserved	1	0	×
P3.09	X10 function selection	Reserved	1	0	×
P3.10	VI function selection（DI）	0~59	1	1	×

P3.11	CI function selection（DI）	0～59	1	1	✕
P3.13	Terminal filter time	0.000S～1.000S	1	0.010S	✕
P3.14	Terminal command mode	0：Two-line mode 1 1：Two-line mode 2 2：Three –line mode 1 3：Three –line mode 2	0	0	○
P3.15	Terminal UP/DOWN rate	0.001HZ/S ～ 65.535HZ/S	0. 001Hz/s	1.00HZ/S	○
P3.16	VI minimum input	0.00V ～ P3.15	1	0.00V	○
P3.17	Corresponding setting of VI minimum input	-100.0% ～ +100.0%	1	0.0%	○
P3.18	VI maximum input	P3.13 ～ +10.00V	0.01V	10.00V	○
P3.19	Corresponding setting of VI maximum input	-100.0% ～ +100.0%	0.01Hz	100.0%	○
P3.20	VI filter time	0.00S ～ 10.00S	0.01S	0.10S	○
P3.21	CI minimum input	0.00V ～ P3.20	0.01V	0.00V	○
P3.22	Corresponding setting ofCI minimum input	-100.0% ～ +100.0%	0.1%	0.0%	○
P3.23	CI maximum input	P3.18 ～ +10.00V	0.01V	10.00V	○
P3.24	Corresponding setting of CI maximum input	-100.0% ～ +100.0%	0.01Hz	100.0%	○
P3.25	CI filter time	0.00S ～ 10.00S	0.01S	0.10S	○
P3.31	Pulse minimum input	0.00KHZ ～ P3.30	0.01V	0.00KHZ	○

P3.32	Corresponding setting of pulse minimum input	-100.0% ～ +100.0%	0.1%	0.0%	○
P3.33	Pulse maximum input	P3.28 ～100.00KHZ	0.01V	50.00KHZ	○
P3.34	Corresponding setting of pulse maximum input	-100.0% ～ +100.0%	0.1%	100.0%	○
P3.35	Pulse filter time	0.00S ～ 10.00S	0.01S	0.10S	○
P3.36	VI curve selection	Unit's digit：VI curve selection 1：Curve1（2 points，see P3.16～P3.19） 2：Curve 2（2 points，see P3.21～P3.24） 3：Curve 3（2 points，see P3.26～P3.29） 4：Curve 4（4 points，see PF.20～PF.27） 5：Curve 5（4 points，see PF.28～PF.35） Ten's digit：CI curve selection，Ditto	111	321	○
P3.37	Setting for AI less than minimum input	Unit's digit：setting for VI less than minimum input 0：Minimum value 1：0.0% Ten's digit：setting for CI less than minimum input	111	000	○
P3.38	X1 delay time	0.0S～ 3600.0S	0.1S	0.0S	✕
P3.39	X2 delay time	0.0S～ 3600.0S	0.1S	0.0S	✕
P3.40	X3 delay time	0.0S～ 3600.0S	0.1S	0.0S	✕
P3.41	X valid mode selection 1	0: High level valid 1：Low level valid Unit's digit：X1 Ten's digit：X2 Hundred's digit：X3 Thousand's digit：X4 Ten thousand's digit：X5	11111	00000	✕

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
P3.42	X valid mode selection 2	0：High level valid 1：Low level valid Unit's digit：X6 Ten's digit：X7 Hundred's digit：X8 Thousand's digit：X9 Ten thousand's digit：X10	11111	00000	×
P3.43	AI as valid status selection of DI	0：High level valid 1：Low level valid Unit's digit：VI Ten's digit：CI	111	111	×
Group P4: Output Terminals					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
P4.00	FM terminal output mode	0：Pulse output (FMP) 1：Switch signal output（FMR）	1	0	○
P4.01	FM function(open-collector output terminal)	0：No output 1：AC drive running 2：Fault output (stop) 3：Frequency-level detection	1	0	○
P4.02	Relay function T/A-T/B-T/C	FDT1 output 4：Frequency reached	1	2	○
P4.03	Extension card relay function （R/A-R/B-R/C）	5：Zero-speed running(no output at stop) 6：Motor overload pre-warning 7：AC drive overload pre-warning 8：Set count value reached 9：Designated count value reached	1	0	○
P4.04	DO1 function selection (Reserved)	10：Length reached 11：PLC cycle complete 12：Accumulative running time reached 13：Frequency limited 14：Torque limited 15：Ready for RUN	1	1	○

| P4.05 | DO2 function selection (Reserved) | 16：VI > CI
17: Frequency upper limit reached
18：Frequency lower limit reached
19：Under voltage state output
20：Communication setting
21：Positioning complete
22：Positioning approach
23： Zero-speed running 2（having output at stop）
24：Accumulative power-on time reached
25：Frequency level detection FDT2 output
26：Frequency 1 reached
27：Frequency 2 reached
28：Current 1 reached
29：Current 2 reached
30：Timing reached
31：VI input limit exceeded
32：Load becoming 0
33：Reverse running
34：Zero current state
35：Module temperature reached
36：Software current limit exceeded
37：Frequency lower limit reached（having output at stop）
38：Alarm output）
39：Motor overheat warning
40：Current running time reached
41：Fault output（there is no output if it is the coast to stop fault and under voltage occurs） | 1 | 4 | ○ |

P4.06	FMP function selection	0：Running frequency 1：Set frequency 2：Output current 3：Output torque 4：Output power	1	0	
P4.07	AO1 function selection	5：Output voltage 6：Pulse input（100.0% at 100.0KHZ） 7：VI 8：CI 10：Length	1	0	
P4.08	AO2 function selection	11：Count value 12：Communication setting 13：Motor rotational speed 14：Output current（100.0% at 1000.0A） 15：Output voltage（100.0% at 1000.0V） 16：Output torque（actual value）	1	1	○
P4.09	Maximum FMP output frequency	0.01KHZ ～ 100.00KHZ	0.01KHZ	50.00KHZ	○
P4.10	AO1 offset coefficient	-100.0% ～ +100.0%	0.001	0.0%	○
P4.11	AO1 gain	-10.00 ～ +10.00	0.01	1.00	○
P4.12	AO2 offset coefficient	-100.0% ～ +100.0%	0.001	0.0%	○
P4.13	AO2 gain	-10.00 ～ +10.00	0.01	1.00	○
P4.14	FMR output delay time	0.0S ～ 3600.0S	0.1s	0.0s	○
P4.15	Relay 1 output delay time	0.0S ～ 3600.0S	0.1s	0.0s	○
P4.16	Relay 2 output delay time	0.0S ～ 3600.0S	0.1s	0.0s	○
P4.17	DO1 output delay time	0.0S ～ 3600.0S	0.1s	0.0s	○
P4.18	DO2 output delay time	0.0S ～ 3600.0S	0.1s	0.0s	○
P4.19	DO valid mode	0: Positive logic 1：Negative logic	11111	00000	○

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
	selection	Unit's digit：FMR Ten's digit：RELAY1 Hundred's digit：RELAY2 Thousand's digit：DO1 Ten thousand's digit：DO2			
Group P5: V/F Control Parameters					
P5.00	V/F curve setting	0：Linear V/F 1：Multi-point V/F 2: SquareV/F 3:1.2-power V/F 4:1.4-power V/F 6:1.6-power V/F 8:1.8-power V/F 9: Reserved 10：V/F complete separation 11：V/F half separation	1	0	×
P5.01	Torque boost	0.0%(fixed torque boost） 0.1% ～ 30.0%		Model dependent	○
P5.02	Cut-off frequency of torque boost	0.00HZ to maximum output frequency	0.01HZ	50.00HZ	×
P5.03	Multi-point V/F frequency 1 (F1)	0.00HZ ～ P5.05	0.01HZ	0.00HZ	×
P5.04	Multi-point V/F voltage 1 (V1)	0.0% ～ 100.0%	0.1%	0.0%	×
P5.05	Multi-point V/F frequency 2 (F2)	P5.03 ～ P5.07	0.01HZ	0.00HZ	×
P5.06	Multi-point V/F voltage 2(V2)	0.0% ～ 100.0%	0.1%	0.0%	×
P5.07	Multi-point V/F frequency 3 (F3)	P5.05 to rated motor frequency	0.01HZ	0.00HZ	×
P5.08	Multi-point V/F voltage 3 (V3)	0.0% ～ 100.0%	0.1%	0.0%	×
P5.09	V/F slip compensation	0.0% ～ 200.0%	0.1%	0.0%	○

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
	gain				
P5.10	V/F over-excitation gain	0 ～ 200	1	64	○
P5.11	V/F oscillation suppression gain	0 ～ 100	1	Model dependent	○
P5.13	Voltage source for V/F separation	0：Digital setting 1：VI 2：CI 4：Pulse setting 5：Multi-reference 6：Simple PLC 7：PID 8：Communication setting (100.0% corresponds to the rated motor voltage)	1	0	○
P5.14	Voltage digital setting for V/F separation	0V to rated motor voltage	1	0V	○
P5.15	Voltage rise time of V/F separation	0.0S ～ 1000.0S	0.1S	0.0S	○
Group P6: PID Function					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
P6.00	PID setting source	0：P6.01 setting 1：VI 2：CI 4：Pulse setting 5：Communication setting 6：Multi-segment instruction setting	1	0	○
P6.01	PID digital setting	0.0% ～100.0%	1	50	○
P6.02	PID feedback	0：VI	1	0	○

	source	1：CI 3：VI-CI 4：Pulse setting 5：Communication setting 6：VI+CI 7：MAX(|VI|+|CI|) 8：MIN(|VI|,|CI|)			
P6.03	PID action direction	0：Forward action 1：Reverse action	1	0	○
P6.04	PID setting feedback range	0 ～ 65535	1	1000	○
P6.05	Proportional gain KP1	0.0 ～ 100.0	0.1	20.0	○
P6.06	Integral time TI1	0.01S ～ 10.00S	0.01S	2.00S	○
P6.07	Differential time TD1	0.000S ～ 10.000S	0.001S	0.000S	○
P6.08	Cut-off frequency of PID reverse rotation	0.00 to maximum frequency	0.01	2.00HZ	○
P6.09	PID deviation limit	0.0% ～ 100.0%	0.1%	0.0%	○
P6.10	PID differential limit	0.00% ～ 100.00 %	0.01%	0.10%	○
P6.11	PID setting change time	0.00 ～ 650.00S	0.01S	0.00S	○
P6.12	PID feedback filter time	0.00 ～ 60.00S	0.01S	0.00S	○
P6.13	PID output filter time	0.00 ～ 60.00S	0.01S	0.00S	○
P6.14	Reserved				○
P6.15	Proportional gain KP2	0.0 ～ 100.0	0.1	20.0	○
P6.16	Integral time TI2	0.01S ～ 10.00S	0.01	2.00S	○
P6.17	Differential time TD2	0.000S ～ 10.000S	0.001S	0.000S	○
P6.18	PID parameter	0：No switchover	0.01	0	○

		1：Switchover via Xi 2：Automatic switchover based on deviation 3：Automatic switchover based on running frequency			
P6.19	PID parameter switchover deviation 1	0.0% ～ P6.20	0.1%	20.0%	○
P6.20	PID parameter switchover deviation 2	P6.19 ～ 100.0 %	0.1%	80.0%	○
P6.21	PID initial value	0．0% ～100.0 %	1	0．0%	○
P6.22	PID initial value holding time	0.00 ～ 650.00S	0.01S	0.00S	○
P6.23	Maximum deviation between two PID outputs in forward direction	0.00% ～ 100.00%	0.01%	1.00%	○
P6.24	Maximum deviation between two PID outputs in reverse direction	0.00% ～ 100.00%	0.01%	1.00%	○
P6.25	PID integral property	Unit's digit：Integral separated 0：Invalid 1：Valid Ten's digit：whether to stop integral operation when the output reaches the limit 0：Continue integral operation 1：Stop integral operation	00～11	00	○
P6.26	Detection value of PID feedback loss	0.0%：Not judging feedback loss 0.1% ～100.0%	0.01Hz	0.0%	○
P6.27	Detection time of	0．0S ～20.0S	0.1S	1.0S	○

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
	PID feedback loss				
P6.28	PID operation at stop	0：No PID operation at stop 1：PID operation at stop	1	0	○

Group P7: Operation Panel and Display

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
P7.00	REV key function selection	0：RVE key disabled 1：Switchover between operation panel control and remote command control(terminal or communication) 2：Switchover between forward rotation and reverse rotation 3：Forward JOG 4：Reverse JOG 5: Select RVE reverse run	1	3	○
P7.01	STOP key function	0：STOP key enabled only in operation panel control 1：STOP key enabled in any operation mode	1	0	○

P7.02	LED display running parameters 1	0000~FFFF Bit00: Running frequency 1(Hz) Bit01: Set frequency (Hz) Bit02: Bus voltage(V) Bit03: Output voltage(V) Bit04: Output current(A) Bit05: Output power(KW) Bit06: Output torque (%) Bit07:DI input status Bit08:DO output status Bit09:A/1 voltage（V） Bit10:A/2 voltage（V） Bit11:A/3 voltage（V） Bit12: Count value Bit13: Length value Bit14: Load speed display Bit15:PID setting	1	001F	○
P7.03	LED display running parameters 2	0000~FFFF Bit00:PID feedback Bit01:PLC stage Bit02:Pulse setting frequency（kHZ） Bit03: Running frequency 2（HZ） Bit04: Remaining running time Bit05:A/1 voltage before correction（V） Bit06:A/2 voltage before correction（V） Bit07:A/3 voltage before correction（V） Bit08: Linear speed Bit09: Current power-on time（Hour） Bit10: Current running time（Min） Bit11: Pulse setting frequency（kHZ）	0.1	0000	○

		Bit12: Communication setting value Bit13: Encoder feedback speed Bit14: Main frequency X display（HZ） Bit15: Auxiliary frequency Y display（HZ）			
P7.04	LED display stop parameters	0000～FFFF Bit00: Set frequency（HZ） Bit01: Bus voltage(V) Bit02:DI input status Bit03:DO output status Bit04:A/1 voltage（V） Bit05:A/2 voltage（V） Bit06:A/3 voltage（V） Bit07: Count value Bit08: Length value Bit09:PLC stage Bit10: Load speed Bit11:PID setting Bit12:Pulse setting frequency（kHZ）	1	0033	○
P7.05	Load speed display coefficient	0.0001～6.5000	0.0001	1.0000	○
P7.06	Heatsink temperature of inverter module	0.0℃～100.0℃	1	000	*
P7.07	Product number	0.00～10.00	0.01	-	*
P7.08	Accumulative running time	0H～65535h	1	000	*
P7.09	Software version 1	0.00～10.00	0.01	9000	*
P7.10	Software version 2	0.00～10.00	0.01	0.55	*
P7.11	Number of decimal places	Unit's digit：U0-14 number of decimal places	0.1	10.0	○

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
	for load speed display	0:0 decimal place 1:1 decimal place 2:2 decimal place 3:3 decimal place Ten's digit：U0-19/U0-29 number of decimal places 1:1 decimal place 2:2 decimal place			
P7.12	Accumulative power-on time	0 ～ 65535h	1	000	*
P7.13	Accumulative power consumption	0 ～ 65535kw·h	0.1	0	*
Group P8: Motor Parameters					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
P8.00	Motor type selection	2：Permanent magnet synchronous machine	2	2	×
P8.01	Rated motor power	0.1KW～1000.0KW	0.1kW	Model dependent	×
P8.02	Rated motor voltage	1V～2000V	1V	Model dependent	×
P8.03	Rated motor current	0.01A～655.35A(AC power≤55KW) 0.1A～6553.5A(AC power≥55KW)	0.01A	Model dependent	×
P8.04	Rated motor frequency	0.01Hz to maximum frequency	0.01Hz	Model dependent	×
P8.05	Rated motor rotational speed	1rpm～65535rpm	1rpm	Model dependent	×
P8.16	Synchronous motor stator resistance	0.001Ω～65.535Ω(AC power≤55KW) 0.0001Ω～6.5535Ω(AC	0.001Ω	Tuning parameter	×

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
		power≥55KW)			
P8.17	Synchronous motor D-axis inductance	0.01mH～655.35mH(AC power≤55KW) 0.001mH～65.535mH(AC power≥55KW)	0.001 mH	Tuning parameter	×
P8.18	Synchronous motor Q-axis inductance	0.01mH～655.35mH(AC power≤55KW) 0.001mH～65.535mH(AC power≥55KW)	0.01mH	Tuning parameter	×
P8.20	Synchronous motor BEMF	0.0V~6553.5V	0.0V	Tuning parameter	×
P8.27	Encoder pulses per revolution	1～65535	1	1024	×
P8.28	Encoder type	0: ABZ incremental encoder 1: UVW incremental encoder 2: Resolver 3: SIN/COS encoder 4：Wire-saving UVW encoder	1	0	×
P8.30	A,B phase sequence of ABZ incremental encoder	0：Forward 1：Reverse	1	0	×
P8.31	Encoder installation angle	0.0～359.9°	0.1°	1	×
P8.32	U,V,W phase sequence of UVW encoder	0：Forward 1：Reverse	1	0	×
P8.33	UVW encoder angle offset	0.0～359.9°	0.1°	0.0°	×
P8.34	Number of pole pairs of resolver	1～65535	1	1	×
P8.37	Auto-tuning selection	00: No auto-tuning 11：Synchronous machine no-load tuning 12：Synchronous machine on-load tuning	1	0	×
Group P9: Vector Control Parameters					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**

P9.00	Speed/Torque control mode	0：Speed control 1：Torque control	1	0	×
P9.01	Speed loop proportional gain 1	1～100	1	30	○
P9.02	Speed loop integral time1	0.01s～10.00s	0.01s	0.50S	○
P9.03	Switchover frequency 1	0.00～P9.06	0.01Hz	5.00HZ	○
P9.04	Speed loop proportional gain 2	1～100	1	20	○
P9.05	Speed loop integral time 2	0.01s～10.00s	0.01s	1.00s	○
P9.06	Switchover frequency 2	P9.02～to maximum output frequency	0.01Hz	10.00Hz	○
P9.07	Vector control slip gain	50%～200%	0.01	100%	○
P9.08	Time constant of speed loop filter	0.000s～0.100s	0.001s	28	○
P9.09	Vector control over-excitation gain	0～200	1	64	○
P9.10	Torque upper limit source in speed control mode	0：P9.11 setting 1：VI 2：CI 4：Pulse setting 5：Communication setting 6：MIN(VI，CI) 7：MAX(VI，CI) The full scale of the 1-7 option corresponds to P9.11	1	0	○
P9.11	Digital setting of torque upper limit in speed control mode	0.0%～200.0%	0.001	150.0%	○
P9.12	Torque upper limit source in speed control(stop)	0：P9.13 setting 1：VI 2：CI 4：Pulse setting	1	0	○

	mode	5：Communication setting 6：MIN(VI，CI) 7：MAX(VI，CI) The full scale of the 1-7 option corresponds to P9.13			
P9.13	Digital setting of torque upper limit in speed control(stop) mode	0.0%～200.0%	0.001	150.0%	○
P9.14	Excitation adjustment proportional gain	0～60000	1	2000	○
P9.15	Excitation adjustment integral gain	0～60000	1	1300	○
P9.16	Torque adjustment proportional gain	0～60000	1	2000	○
P9.17	Torque adjustment integral gain	0～60000	1	1300	○
P9.18	Speed loop integral property	Unit's digit：integral separation 0：Disabled 1：Enabled	1	0	○
P9.19	Synchronous machine weak magnetic mode	0、1、2	1	0	○
P9.20	Synchronous machine weak magnetic gain	1~50	1	1	○
P9.23	Power generation torque upper limit selection	0、1	0	0	○
P9.24	Synchronous machine output voltage upper limit	0%~50%	0%	5%	○

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P9.25	Synchronous machine initial position angle detection current	80%~180%	80%	80%	○
P9.26	Synchronous machine initial position angle detection	0、1、2	0	2	○
P9.28	Synchronous machine salient rate adjustment gain	50~500	50	100	○
P9.29	Maximum torque current ratio control	0、1	0	0	○
P9.33	Z Signal correction	0、1	0	1	○
P9.37	Low speed excitation current	30%~80%	30%	30%	○
P9.38	Low speed carrier frequency	0.8K%~P0.10	0.8K	0.8K	○
P9.42	Synchronous machine inductance test current	30%~120%	30%	50%	○
P9.44	Zero servo selection	0~1	0	0	○
P9.45	Switching frequency	0.00~P9.03	0.00Hz	0.00Hz	○
P9.46	Zero servo speed loop proportional gain	0~100	0	10	○
P9.47	Zero servo speed loop integration time	0.01s~10.00s	0.01s	0.50s	○
P9.51	Driving torque upper limit source	0：Digital setting1(P9.26) 1：VI 2：CI 4：Pulse setting	1	0	×

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
		5：Communication setting 6：MIN(VI, CI) 7：MAX(VI, CI)			
P9.53	Digital setting of torque upper limit in torque control mode	-200.0%～200.0%	0.1%	150.0%	○
P9.54	Torque filter	-	-	-	*
P9.55	Maximum forward frequency in torque control mode	0.00Hz～maximum frequency	0.01Hz	50.00Hz	○
P9.56	Maximum reverse frequency in torque control mode	0.00Hz～maximum frequency	0.01Hz	50.00Hz	○
P9.57	Acceleration time of torque control	0.00s～65000s	0.01s	0.00s	○
P9.58	Deceleration time of torque control	0.00s～65000s	0.01s	0.00s	○

Group PA: Fault and Protection					
Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
PA.00	Motor overload protection selection	0: Disabled 1: Enabled		1	○
PA.01	Motor overload protection gain	0.20～10.00		1.00	○
PA.02	Motor overload protection coefficient	50%～100%		80%	○
PA.03	Over voltage stall	0～100		0	○

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	gain				
PA.04	Over voltage stall protective current	120%～150%		130%	○
PA.05	Over current stall gain	0～100		20	○
PA.06	Over current stall protective current	100%～200%		150%	○
PA.07	Short-circuit to ground upon power-on	0：Disabled 1：Enabled		1	○
PA.08	Brake unit action starting voltage	650V~800V		720V	○
PA.09	Fault auto reset times	0～20		0	○
PA.10	DO action during fault auto reset	0：Not act 1：Act		0	○
PA.11	Time interval of fault auto reset	0.1s～100.0s		1.0s	○
PA.12	Input phase loss protection/contactor energizing	Unit's digit：Input phase loss protection Ten's digit：Contactor energizing protection 0：Disabled 1：Enabled		11	○
PA.13	Output phase loss protection selection	0：Disabled 1：Enabled		1	○
PA.14	1st fault type	0：No fault	-	-	*
PA.15	2nd fault type	1：Over current during	-	-	*
PA.16	3rd (latest) fault type	acceleration（E-01） 2：Over current during deceleration（E-02） 3：Over current at constant speed（E-03） 4：Over voltage during acceleration（E-04）	-	-	*

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| | | 5：Over voltage during deceleration（E-05）
6：Over voltage at constant speed （E-06）
7：Contactor fault（E-07）
8：AC drive overheat（E-08）
9：AC drive overload（E-09）
10: Motor overload（E-10）
11：Under voltage（E-11）
12：Power output phase loss （E-12）
13：External equipment fault （E-13）
14：Current detection fault （E-14）
15: Communication fault （E-15）
16: System interference （E-16）
17：EEPROM read-write fault （E-17）
18：Motor auto-tuning fault （E-18)
19：Power input phase loss （E-19）
20：Short circuit to ground （E-20）
21：Encoder/PG card fault （E-21）
22：Buffer resistance overload fault（E-22）
23: Accumulative running time reached（E-23）
24：Accumulative power-on time reached（E-24
25：Motor switchover fault during running（E-25）
26：With-wave current limit fault（E-26） | | | |

		27：Motor overheat（E-27） 28：Too large speed deviation（E-28） 29：Motor over-load（E-29） 30：Load becoming 0（E-30） 31：PID feedback lost during running（E-31） 32: User defined fault 1（E-32） 33: User defined fault 2（E-33） E-34：Contactor failure E-35：Short circuit to ground E-51：Initial position error(E-51)			
PA.17	Frequency upon 3rd fault	-	-	-	*
PA.18	Current upon 3rd fault	-	-	-	*
PA.19	Bus voltage upon 3rd fault	-	-	-	*
PA.20	Input terminal status upon 3rd fault	-	-	-	*
PA.21	Output terminal status upon 3rd fault	-	-	-	*
PA.22	AC drive status upon 3rd fault	-	-	-	*
PA.23	Power-on time upon 3rd fault	-	-	-	*
PA.24	Running time upon 3rd fault	-	-	-	*
PA.25	Frequency upon 2nd fault	-	-	-	*
PA.26	Current upon 2nd fault	-	-	-	*
PA.27	Bus voltage upon 2nd fault	-	-	-	*
PA.28	Input terminal status upon 2nd fault	-	-	-	*

PA.29	Output terminal status upon 2nd fault	-	-	-	*
PA.30	AC drive status upon 2nd fault	-	-	-	*
PA.31	Power-on time upon 2nd fault	-	-	-	*
PA.32	Running time upon 2nd fault	-	-	-	*
PA.33	Frequency upon 1st fault	-	-	-	*
PA.34	Current upon 1st fault	-	-	-	*
PA.35	Bus voltage upon 1st fault	-	-	-	*
PA.36	Input terminal status upon 1st fault	-	-	-	*
PA.37	Output terminal status upon 1st fault	-	-	-	*
PA.38	AC drive status upon 1st fault	-	-	-	*
PA.39	Power-on time upon 1st fault	-	-	-	*
PA.40	Running time upon 1st fault	-	-	-	*
PA.43	Fault protection action selection1	Unit's digit：Motor overload (E-11) 0：Coast to stop 1：Stop according to the stop mode 2：Continue to run Ten's digit：Power output phase loss (E-12) Hundred's digit：External equipment fault(E-15) Thousand's digit：Communication fault (E-16)	11111	00000	○

		Ten thousand's digit：EEPROM read-write fault (E-17)			
PA.44	Fault protection action selection 2	Unit's digit：Power input phase loss (E-19) 0：Coast to stop Ten's digit：Encoder fault (E-21) 0：Coast to stop 1：Stop according to the stop mode Hundred's digit：Accumulative running time reached Thousand's digit：Accumulative power-on time reached(E-24) Ten thousand's digit：Motor overheat (E-27)	11111	00000	○
PA.45	Fault protection action selection 3	Unit's digit：Too large speed deviation (E-28) Ten's digit：Motor over-speed (E-29） Hundred's digit：Load becoming 0 (E-31） Thousand's digit：PID feedback lost during running (E-34） Ten thousand's digit：Reserved	11111	00000	○
PA.46	Fault protection action selection 4	Unit's digit：User-defined fault 1 (E-32) 0：Coast to stop 1：Stop according to the stop mode 2：Continue to run Ten's digit：User-defined fault 2 (E-33) Hundred's digit：Reserved	11111	00000	○
PA.50	Frequency selection for	0：Current running frequency 1：Set frequency	1	0	○

	continuing to run upon fault	2：Frequency upper limit 3：Frequency lower limit 4：Backup frequency upon abnormality			
PA.51	Backup frequency upon abnormality	0.0%～100.0%（100.0% to maximum frequency）	0.001	100.0%	○
PA.52	Type of motor temperature sensor	0：No temperature sensor 1：PT100 2：PT1000	1	0	○
PA.53	Motor overheat protection threshold	0℃～200℃	1℃	110℃	○
PA.54	Motor overheat warning threshold	0℃～200℃	1℃	90℃	○
PA.55	Action selection at instantaneous power failure	0：Invalid 1：Decelerate 2：Deceleration to stop	1	0	○
PA.56	Action pause judging voltage at instantaneous power failure	80.0%～100.0%	0.01Hz	90.0%	○
PA.57	Voltage rally judging time at instantaneous power failure	0.00s～100.00s	0.01s	0.50s	○
PA.58	Action judging voltage at instantaneous power failure	60.0%～100.0%（Standard bus voltage）	0.10%	80.0%	○
PA.59	Protection upon load becoming 0	0：Disabled 1：Enabled	1	0	○
PA.60	Detection level of load becoming 0	0.0～100.0%	0.001	10.0%	○
PA.61	Detection time of load becoming 0	0.0～60.0s	0.1s	1.0%	○

Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
PA.63	Over-speed detection value	0.0%~50.0% (Maximum frequency)	0.1%	20.0%	○
PA.64	Over-speed detection time	0.0s:Not detected 0.1~60.0s	0.001	1.0s	○
PA.65	Detection value of too large speed deviation	0.0%~50.0% (Maximum frequency)	0.1%	20.0%	○
PA.66	Detection time of too large speed deviation	0.0s: Not detected 0.1~60.0s	0.001	5.0s	○

Group PB: Multi-Reference and Simple PLC Function					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
Pb.00	Multi-reference 0	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.01	Multi-reference 1	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.02	Multi-reference 2	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.03	Multi-reference 3	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.04	Multi-reference 4	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.05	Multi-reference 5	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.06	Multi-reference 6	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.07	Multi-reference 7	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.08	Multi-reference 8	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.09	Multi-reference 9	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.10	Multi-reference 10	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.11	Multi-reference 11	Lower limit frequency ~	0.01Hz	000.00H	○

		upper limit frequency		z	
Pb.12	Multi-reference 12	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.13	Multi-reference 13	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.14	Multi-reference 14	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.15	Multi-reference 15	Lower limit frequency ~ upper limit frequency	0.01Hz	000.00Hz	○
Pb.16	Simple PLC running mode	0：Stop after AC drive runs one cycle 1：Keep final values after AC drive runs one cycle 2：Repeat after AC drive runs one cycle	0	0	○
Pb.17	Simple PLC retentive selection	Unit's digit：Retentive upon power failure 0：NO 1：YES Ten's digit：Retentive upon stop 0：NO 1：YES	0	00	○
Pb.18	Running time of simple PLC reference 0	0.0s(h)～6553.5s(h)	0	0.0s(h)	○
Pb.19	Deceleration time of simple PLC reference 0	0～3	0	0	○
Pb.20	Running time of simple PLC reference 1	0.0s(h)～6553.5s(h)	0	0.0s(h)	○
Pb.21	Deceleration time of simple PLC reference 1	0～3	0	0	○
Pb.22	Running time of simple PLC reference 2	0.0s(h)～6553.5s(h)	0	0.0s(h)	○

Pb.23	Deceleration time of simple PLC reference 2	0~3	0	0	○
Pb.24	Running time of simple PLC reference 3	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.25	Deceleration time of simple PLC reference 3	0~3	0	0	○
Pb.26	Running time of simple PLC reference 4	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.27	Deceleration time of simple PLC reference 4	0~3	0	0	○
Pb.28	Running time of simple PLC reference 5	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.29	Deceleration time of simple PLC reference 5	0~3	0	0	○
Pb.30	Running time of simple PLC reference 6	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.31	Deceleration time of simple PLC reference 6	0~3	0	0	○
Pb.32	Running time of simple PLC reference 7	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.33	Deceleration time of simple PLC reference7	0~3	0	0	○
Pb.34	Running time of simple PLC reference 8	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.35	Deceleration time of simple PLC reference 8	0~3	0	0	○

Pb.36	Running time of simple PLC reference 9	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.37	Deceleration time of simple PLC reference 9	0~3	0	0	○
Pb.38	Running time of simple PLC reference 10	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.39	Deceleration time of simple PLC reference10	0~3	0	0	○
Pb.40	Running time of simple PLC reference 11	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.41	Deceleration time of simple PLC reference 11	0~3	0	0	○
Pb.42	Running time of simple PLC reference 12	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.43	Deceleration time of simple PLC reference 12	0~3	0	0	○
Pb.44	Running time of simple PLC reference 13	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.45	Deceleration time of simple PLC reference 13	0~3	0	0	○
Pb.46	Running time of simple PLC reference 14	0.0s(h)~6553.5s(h)	0	0.0s(h)	○
Pb.47	Deceleration time of simple PLC reference 14	0~3	0	0	○
Pb.48	Running time of simple PLC reference	0.0s(h)~6553.5s(h)	0	0.0s(h)	○

		15				
Pb.49	Deceleration time of simple PLC reference 15	0～3	0	0	○
Pb.50	Time unit of simple PLC running	0：s(second) 1：H（hour)	0	0	○
Pb.51	Multi-reference 0 source	0：Set by PB.00 1：VI 2：CI 4:Pulse setting 5：PID 6：Set by preset frequency，modified via terminal UP/DOWN	0	0	○

Group PC: Communication Parameters					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
PC.00	Baud rate	MODBUS baud rate： 0：300BPS 1：600BPS 2：1200BPS 3：2400BPS 4：4800BPS 5：9600BPS 6：19200BPS 7：38400BPS 8：57600BPS 9：115200BPS	1	5	○
PC.01	Modbus data format	0：No check（8-N-2) 1：Even parity check（8-E-1) 2：Odd parity check（8-O-1) 3：No check（8-N-1) (Valid for MODBUS)	1	0	○
PC.02	Local address	0：Broadcast address 1～247 （Valid for MODBUS、Profibus-DP、CANlink)	1	1	○

PC.03	Response delay	0～20ms(Valid for MODBUS）	1ms	2	○
PC.04	Communication timeout	0.0：Invalid 0.1：～60.0s	0.1s	0.0	○
PC.05	Modbus protocol data format	MODBUS： 0：Non-standard Modbus protocol 1：Standard Modbus protocol	1	0	○

Group Pd: Function Code Management					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
Pd.00	User password	0～65535	1	0	○
Pd.01	Restore default setting	0：No operation 01：Restore factory setting, except motor parameters 02：Clear records	1	0	×
Pd.02	AC drive parameter display selection	Unit's digit：Group b display selection 0：Not display 1：Display Ten's digit: Group E display selection 0：Not display 1：Display	1	001	×
Pd.03	Individualized parameter display selection	0、Display basic group； 1、Switchover to user-defined parameter display by press M 2、Switchover to user-modified parameter display by press M	1	0	○
Pd.04	Parameter modification property	0：Modifiable 1：Not modifiable	1	0	○
Pd.05	Second row digital tube display	Double effective	-	-	x

Group PE: Swing Frequency, Fixed Length and Count					
Function	**Parameter Name**	**Setting Range**	**Minimum**	**Default**	**Property**

Code			Unit		
PE.00	Swing frequency setting mode	0：Relative to the central frequency 1：Relative to the maximum frquency	1	0	○
PE.01	Swing frequency amplitude	0.0%～100.0%	0.1%	0.0%	○
PE.02	Jump frequency amplitude	0.0%～50.0%	0.1%	0.0%	○
PE.03	Swing frequency cycle	0.1s～3000.0s	0.1s	10.0s	○
PE.04	Triangular wave rising time coefficient	0.1s～100.0%	0.1%	50.0%	○
PE.05	Set length	0m～65535m	1m	1000m	○
PE.06	Actual length	0m～65535m	1m	0m	○
PE.07	Number of pulse per meter	0.1～6553.5	0.1	100.0	○
PE.08	Set count value	1～65535	1	1000	○
PE.09	Designated count value	1～65535	1	1000	○

Group PF: AIAO Correction and AI Curve Setting					
Function Code	**Parameter Name**	**Setting Range**	**Minimum Unit**	**Default**	**Property**
PF.00	VI measured voltage 1	0.500V～4.000V	0.001V	2.000V	○
PF.01	VI display voltage1	0.500V～4.000V	0.001V	2.000V	○
PF.02	VI measured voltage 2	6.000V～9.999V	0.001V	8.000V	○
PF.03	VI display voltage 2	6.000V～9.999V	0.001V	8.000V	○
PF.04	CI measured voltage 1	0.500V～4.000V	0.001V	2.000V	○
PF.05	CI display voltage 1	0.500V～4.000V	0.001V	2.000V	○
PF.06	CI measured voltage 2	6.000V～9.999V	0.001V	8.000V	○
PF.07	CI display voltage 2	6.000V～9.999V	0.001V	8.000V	○
PF.12	AO1 target voltage 1	0.500V～4.000V	0.001V	2.000V	○
PF.13	AO1 measured	0.500V～4.000V	0.001V	2.000V	○

	voltage 1				
PF.14	AO1 target voltage 2	6.000V~9.999V	0.001V	8.000V	○
PF.15	AO1 measured voltage 2	6.000V~9.999V	0.001V	8.000V	○
PF.16	AO2 target voltage 1	0.500V~4.000V	0.001V	2.000V	○
PF.17	AO2 measured voltage 1	0.500V~4.000V	0.001V	2.000V	○
PF.18	AO2 target voltage 2	6.000V~9.999V	0.001V	8.000V	○
PF.19	AO2 measured voltage 2	6.000V~9.999V	0.001V	8.000V	○
PF.20	AI curve 4 minimum input	-10.00V~PF.22	0.01V	0.00V	○
PF.21	Corresponding setting of AI curve 4 minimum input	-100.0%~+100.0%	0.001	0.0%	○
PF.22	AI curve 4 inflexion 1 input	PF.20~PF.22	0.01V	3.00V	○
PF.23	Corresponding setting of AI curve 4 inflexion 1 input	-100.0%~+100.0%	0.001	30.0%	○
PF.24	AI curve 4 inflexion 2 input	PF.22~PF.26	0.01V	6.00V	○
PF.25	Corresponding setting of AI curve 4 inflexion 2 input	-100.0%~+100.0%	0.001	60.0%	○
PF.26	AI curve 4 maximum input	PF.26~+10.00V	0.01V	10.00V	○
PF.27	Corresponding setting of AI curve 4 maximum input	-100.0%~+100.0%	0.001	100.0%	○
PF.28	AI curve 5 minimum	-10.00V~PF.10	0.01V	-10.00V	○

	input				
PF.29	Corresponding setting of AI curve 5 minimum input	-100.0%～+100.0%	0.001	-100.0%	○
PF.30	AI curve 5 inflexion 1 input	PF.28～PF.32	0.01V	-3.00V	○
PF.31	Corresponding setting of AI curve 5 inflexion 1 input	-100.0%～+100.0%	0.001	-30.0%	○
PF.32	AI curve 5 inflexion 2 input	PF.30～PF.34	0.01V	3.00V	○
PF.33	Corresponding setting of AI curve 5 inflexion 2 input	-100.0%～+100.0%	0.001	30.0%	○
PF.34	AI curve 5 maximum input	PF.32～+10.00V	0.01V	10.00V	○
PF.35	Corresponding setting of AI curve 5 maximum input	-100.0%～+100.0%	0.001	100.0%	○
PF.36	Jump point of VI input corresponding setting	-100.0%～100.0%	0.001	0%	○
PF.37	Jump amplitude of VI input corresponding setting	0.0%～100.0%	0.001	0.5%	○
PF.38	Jump point of CI input corresponding setting	-100.0%～100.0%	0.001	0%	○
PF.39	Jump amplitude of CI input corresponding setting	0.0%～100.0%	0.001	0.5%	○
Group E0 : User-defined Parameters					

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Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
E0.00	User-defined function code 0	P0.01～PE.xx	-	P0.01	○
E0.01	User-defined function code 1	P0.01～PE.xx	-	P0.02	○
……	……	……	……	……	○
E0.06	User-defined function code 6	P0.01～PE.xx	-	P0.18	○
E0.07～ E0.31	User-defined function code 7～31	P0.01～PE.xx	-	P0.02	○

Group b: Standard Monitoring Parameters					
Function Code	Parameter Name	Setting Range	Minimum Unit	Default	Property
b0.00	Running frequency （HZ）	0.00Hz～P0.02Hz	0.01Hz	7000H	
b0.01	Setting frequency （HZ）	0.00Hz～P0.02Hz	0.01Hz	7001H	
b0.02	Bus voltage（V）	0.0V~1000.0V	0.1V	7002H	
b0.03	Output voltage（V）	0V~380V	1V	7003H	
b0.04	Output current（A）	0.01A～655.35A	0.01A	7004H	
b0.05	Output power（KW）	0.0kw~1000.0kw	0.1KW	7005H	
b0.06	Output torque （%）	0.0%~200.0%	0.1%	7006H	
b0.07	DI input status	H.0000~H.FFFF	1	7007H	
b0.08	DO output status	H.0000~H.FFFF	1	7008H	
b0.09	VI voltage （V）	0.00V~10.00V	0.01V	7009H	
b0.10	CI voltage（V）/current （mA）	0.00V~10.00V	0.01V/0.01mA	700AH	

b0.12	Count value	0~65535	1	700CH	
b0.13	Length value	0~65535	1	700DH	
b0.14	Load speed display	0.00Hz～P0.05Hz	1	700EH	
b0.15	PID setting	0~65535	1	700FH	
b0.16	PID feedback	0.00~300.00kHz	1	7010H	
b0.17	PLC stage	0~65535	1	7011H	
b0.18	Pulse input frequency	0.0Hz～P0.05Hz	0.01kHz	7012H	
b0.19	Feedback speed（HZ）	0.00V~10.00V	0.01Hz	7013H	
b0.20	Remaining running time	0.0~6553.5	0.1Min	7014H	
b0.21	V1 voltage before correction	0.00V~10.00V	0.001V	7015H	
b0.22	C1 voltage /current before correction	0.00V~10.00V	0.001V/0.01mA	7016H	
b0.24	Linear speed	0 m/Min ~65535 m/Min	1m/Min	7018H	
b0.25	Accumulative power-on time	0.0~6553.5	1Min	7019H	
b0.26	Accumulative running time	0.0~6553.5	0.1Min	701AH	
b0.27	Pulse input frequency	0.0~300.0kHz	1Hz	701BH	
b0.28	Communication setting value	0.00~100.00	0.01%	701CH	
b0.29	Encoder feedback speed	0.00Hz～P0.02Hz	0.01Hz	701DH	
b0.30	Main frequency X	0.00Hz～P0.02Hz	0.01Hz	701EH	
b0.31	Auxiliary frequency Y	0V~380V	0.01Hz	701FH	

b0.32	Viewing any register address value	0V~380V	1	7020H	
b0.34	Motor temperature	0.0~6553.5	1℃	7022H	
b0.35	Target torque（%）	0.0~6553.5	0.1%	7023H	
b0.36	Resolver position	0.0~300.0kHz	1	7024H	
b0.37	Power factor angle	0.00~100.00	0.1°	7025H	
b0.38	ABZ position	0.00Hz～P0.02Hz	1	7026H	
b0.39	Target voltage upon V/F separation	0.00Hz～P0.02Hz	1V	7027H	
b0.40	Output voltage upon V/F separation	0V~380V	1V	7028H	
b0.41	DI state visual display	-	1	7029H	
b0.42	DO state visual display	-	1	702AH	
b0.43	DI function state visual display 1	-	1	702BH	
b0.44	DI function state visual display 2	-	1	702CH	

Chapter 3 Troubleshooting

3.1 Fault Alarm and Troubleshooting

When inverter trips, protection function acts as LED displays fault code, fault relay acts, inverter output stops and motor coasts to stop. YX9200 series inverter's fault contents and troubleshooting are shown in Table 3-1. After fault alarm occurs, inverter should be inspected according to Table 3-1. When technical assistance required, please contact your supplier.

Table 3-1 Alarms and troubleshooting

Fault code	Type of faults	Possible fault reasons	Troubleshooting
E-01	Acc over current	Acc time is short	Adjust acc time
		V/F curve setup is not suitable	Adjust V/F curve
		Restart the motor in running	Setup start mode as speed tracking
		Torque boost setup is big	Adjust torque boost or set as auto
		Inverter power is small	Select inverter with proper capacity
E-02	Dec over current	Dec time is short	Adjust Dec time
		Potential load or load inertia is big	Add suitable braking device
		Inverter power is small	Select inverter with proper capacity
E-03	Over current at constant speed running	Load mutation	Check load
		Acc or Dec time is short	Adjust Acc or Dec time
		Input voltage abnormal	Check input power supply
		Load abnormal	check load
		Inverter power is small	Select inverter with proper capacity
E-04	Acc overvoltage	Input voltage abnormal	Check input power supply
		Acc time is too short	Adjust Acc time
		Restart the motor in running	Setup start mode as speed tracking

Fault code	Type of faults	Possible fault reasons	Troubleshooting
E-05	Dec overvoltage	Dec time is short	Adjust the Dec time
		Potential load or load inertia is big	Add suitable braking device
E-06	Overvoltage at constant speed running	Input voltage abnormal	Check input power supply
		Acc or Dec time is short	Adjust the Acc or Dec time
		Abnormal change of input voltage	Mount input reactor
		Load inertia is big	Add suitable braking device
E-07	Reserved	---	---
E-08	Inverter overheat	Air duct obstruction	Clean air duct
		Environment temperature is high	Improve the ventilation or decrease the carrier frequency
		Fan damaged	Replace a new fan
		Inverter module abnormal	Contact supplier
E-09	Inverter overload	Acc time is short	Adjust Acc time
		DC braking value is high	Decrease DC braking current and increase braking time
		V/F curve setup is not suitable	Adjust V/F curve
		Restart the motor in running	Setup start mode as speed tracking restart
		Grid voltage is low	Check grid voltage
		heavy load	Select inverter with proper capacity
E-10	Motor overload	V/F curve setup is not suitable	Adjust V/F curve
		Grid voltage is low	Check grid voltage
		General motor runs at low speed with heavy load for long	Use a special motor for long term running

		Wrong setting of motor overload protection factor	Set the factor right
		Motor chocked or sudden change of load	Check load
E-11	Under voltage in running	Grid voltage is low	Check grid voltage
E-12	Output lack phases	Cable between Inverter and motor is fault	Check the peripheral fault
		Output 3-phases un balance	Check motor 3 phases winding
		Drive board fault	Contact supplier
		IGBT module fault	Contact supplier
		Control board connecting wire or plug-in unit loose	Check and re-wiring
E-13	Peripheral fault	External fault terminals closed	Check the reason
E-14	Current detecting circuit fault	Loose wiring or terminal connections	Check and re-wiring
		Auxiliary power source damaged	Contact supplier
		Hall component damaged	Contact supplier
		Amplifier circuit abnormal	Contact supplier
E-15	RS232/485 Communication fault	Baud rate setting incorrect	Set baud rate properly
		Serial port communication fault	Press **STOP** Key to reset or contact supplier
		Improper fault alarm parameter setting	Revise function code PC group

		Upper computer doesn't work	Check upper computer and connecting cable
E-16	System interference	Serious interference	Press STOP key to reset or install input power source filter
		DSP read/write error	Reset or contact supplier
E-17	EP^{2}PROM error	Read/write error of control parameter	press STOP key to reset or install input power source filter
E-18	Motor parameter over current fault	Power range of Motor and inverter do not match	Contact supplier press STOP key to reset
E-19	Input phase loss protection	One of R, S, T port has no voltage	Press STOP key to reset check voltage of R, S, T
E-20	Reserved	---	---
E-21	Encorder fault	Encorder not matched	Select right model of Encorder
		Encorder wiring incorrect	Check wiring
		Encorder damaged	Replace encorder
		PG card fault	Replace PG card
E-22	Input Power fault	Input power out of range	Use proper power supply
E-23	Runing time completed	Running time reach setting value	Clear record
E-24	Power on time completed	Power on time reach setting value	Clear record

E-25	Motors switch over fault during running	Change the selection of the motor via terminal during running of Inverter	Perform motor switchover after inverter stops.
E-26	Wave limiting current	Load heavy or motor blocked	Reduce load or check mechanical status
		Inverter power small	Select big rating inverter
E-27	Motor over heat fault	Temperature sensor wiring loose	Check sensor wiring
		Motor temperature high	Reduce carrier frequency or adopt other heat radiation measure.
E-28	large speed deviation	The encoder parameters are set incorrectly.	Set the encoder parameters properly.
		Auto-tuning is not performed.	Perform the motor autotuning.
		PA65、PA66 setting is inproper	Set PA65 and PA66 correctly based on the actual situation.
E-29	Motor over speed fault	Encorder parameter setting incorrect	Set the encorder parameter properly
		Auto-tuning is not performed	Perform motor autotuning
		Motor speed inspection parameter PA63 and PA64 setting is incorrect	Set inspection parameter as actual
E-30	Load drop	Inverter running current is lower than PA60	Check the load disconnected or the setting of PA60 and PA61
E-31	PID feedback loss	PID feedback value less than P6.26 setting value	Check PID feedback signal or set P6.26 properly
E-32	User defined fault 1	Input user defined fault 1 signal via multi-function terminal X	Reset

E-33	User defined fault 2	Input user defined fault 2 signal via multi-function terminal X	Reset
E-34	Contactor fault	Drive board or power supply is abnormal	Change drive board or power supply
		Contactor is abnormal	Change contactor
E-35	Short circuit to ground fault	Motor short circuit to ground	Change motor or cable

3.2 Fault Record Search

Inverter record the fault codes occurred in the last 3 times. The fault information is reserved in PA group. Enter PA parameter group by Keypad operation

3.3 Fault Reset

When fault occurred, please select the following methods to recover:

(1) When fault code is displayed, after ensure it can be reset, press STOP key to reset.

(2) Set one of X1~X8 terminal as external RESET input (P3.00~P3.09=9).

(3) Cut off power.

⚠ **Attention**
(1) Reset the inverter after thoroughly investigating the cause of fault and clearing, otherwise, the inverter may be damaged.
(2) If it can't be reseted or fault occurs again after reset, please check the cause of fault, continuous reset may damage inverter.
(3) Reset the inverter after waiting for 5min when overload or overheat protection occurs.